

ON THE SPECIFIC IDENTITY OF *VIVIPARA DILUVIANA*, KUNTH,
AND *VIVIPARA CLACTONENSIS*, S. V. WOOD.

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IN 1878 the late Mr. S. V. Wood provisionally described and figured two shells from the Pleistocene of Clacton, Essex, as *Paludina Clactonensis*,¹ but he pointed out that a shell from the Pleistocene of Templehof, near Berlin, *P. diluviana*, Kunth,² greatly resembled the Clacton examples, and might prove to be identical. It may be noted that the Clacton shells, which were found by the Rev. O. Fisher, had previously been recorded as *Paludina lenta*.³

The late Professor C. L. F. Sandberger, however, considered that the two forms were distinct, and that the nearest allies to the Clacton shell were *P. Lenzi*, *Moisisovicsi*, and *Brusinaei*, Neumayr, from the Congeria beds of Slavonia.⁴

A third example was found at Clacton by Mr. A. Bell, and when in 1897 we revised the Clacton records, these were the only examples we could trace.⁵ Since then the Rev. J. W. Kenworthy presented to the Essex Field Club a series of non-marine mollusca from Clacton, which had been obtained by himself some years previously. This collection contained a fine series of *Vivipara Clactonensis*, which was noted by Mr. W. M. Webb in 1902,⁶ whilst in 1901 we recorded the occurrence of this form in the Pleistocene gravel at Swanscomb, Kent.⁷ Last year a series of Pleistocene mollusca was sent to one of us by Dr. E. W. Wüst, of Halle, and on comparing the examples of *V. diluviana* from several German localities with the Clacton and Swanscomb shells, it was at once seen that they were identical, in which opinion we have the support of Dr. Wüst, and since *diluviana*, Kunth, has priority by many years, *Clactonensis* must be considered a synonym for that form. *V. diluviana* is apparently not a widely distributed form on the Continent, but it is known from Templehof bei Berlin, Baumgartenbrüch bei Potsdam, Latdorf bei Magdeburg, Sprenberg, and several localities near Halle. In size the Swanscomb

¹ S. V. Wood, "Crag Mollusca," 2nd supplement, 1878, p. 69, and tab. i, figs. 4a, b.

² Zeitschrift Deutsch. Geol. Gesellschaft, Berlin, 1865, tab. vii, fig. 8.

³ S. V. Wood, jun.: Geol. Mag. 1866, p. 350.

⁴ Palaeontographica, Bd. xxvii, p. 98.

⁵ A. S. Kennard & B. B. Woodward, "The Post-Pliocene Non-Marine Mollusca of Essex": Essex Nat., vol. x, pp. 97-100.

⁶ W. M. Webb, "Pleistocene Non-Marine Mollusca from Clacton-on-Sea": Essex Nat., vol. vi, pp. 225-227.

⁷ A. S. Kennard & B. B. Woodward, "The Post-Pliocene Non-Marine Mollusca of the South of England": Proc. Geol. Assoc., 1901, vol. xvii, pp. 238-9.

examples are the largest we have seen, specimens from this locality attaining 27 mm. in altitude, with a maximum breadth of 19·5, the largest Clacton specimen noted being 25 by 19 mm. Up to the present this shell is only known in this country from Clacton and Swanscomb, and additional evidence is thus afforded of the importance of the old Thames-Rhine river system in the distribution of fresh-water mollusca.
